

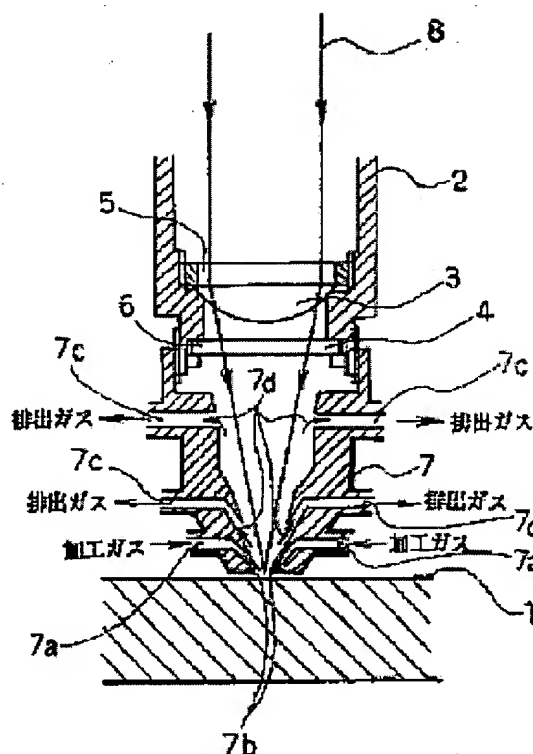
## WORKING HEAD OF LASER BEAM MACHINE

**Patent number:** JP10113786  
**Publication date:** 1998-05-06  
**Inventor:** ARAI KUNIO; KOSUGI SHIGERU  
**Applicant:** HITACHI SEIKO LTD  
**Classification:**  
 - international: B23K26/06; B23K26/14  
 - european:  
**Application number:** JP19960268352 19961009  
**Priority number(s):**

### Abstract of JP10113786

**PROBLEM TO BE SOLVED:** To reduce the holdup quantity of scattered molten objects floating inside a nozzle and the deposit of the scattered molten objects to a protective window, and to perform stable working.

**SOLUTION:** The constitution of the working head of the laser beam machine is as follows; that is, condenser lens 3 and protective window 4 are arranged on the same axis as that of a laser beam 8 irradiating an object 1 to be worked, and the nozzle 7 is arranged on the object 1 side. In this case, jetting nozzle 7b jetting out working gas toward the working position of the object 1, is formed on the lower tip part of the inner peripheral surface of the nozzle 7, and sucking port 7d are formed in plural stages on the upper part of the nozzle 7 from the upside of the jetting nozzle 7b of the inner peripheral surface of the nozzle 7.



Data supplied from the **esp@cenet** database - Patent Abstracts of Japan